Table 2

	Example 5	Example 6	Example 7	Example 8
Curable resin composition	(1)/(5) = 80/20(%)	(1)/(6) = 80/20(%)	(6) 100(%)	(1) 100(%)
Elongation percent. (%) Barcol hardness	21 18 (HBI-A) 60 (HBI-B)	5.8 40 (HBI-A) 74 (HBI-B)	5.0 42 (HBI-A) 75 (HBI-B)	7.0 36 (HBI-A) 75 (HBI-B)
Tensile strength (MPa)	31	62	83	75
HDT (°C)	RT	90	82	102
Amt. of filler (parts) Cal. Carb. SS-80 Hollow filler*	 77 3	 77 3	 77 3	 77 3
Amt. of thixotropic agent (parts)	2.3 REOLOSIL QS20L	2.3 REOLOSIL QS20L	2.3 REOLOSIL QS20L	2.3 REOLOSIL QS20L
Intermediate layer composition: Viscosity Thixotropy Gelation time	 45.0 6.8 7.0	 42.0 6.9 6.5	 49.0 7.1 7.0	 70.2 6.5 7.5
Surface smoothness After demolding After 72 hours	 20.4 19.5	 20.5 20.2	 20.6 20.2	 20.5 20.4
Cracking deflection (mm)	4.0	3.0	2.9	2.9
Remarks	Excellent surface smoothness no change over time. Larger deflection than past, excellent cracking resistance	Same as left	Same as left	Same as left

Example 9

With the exception of not providing a gelcoat resin layer (gel coat-less) and using the resin composition used as the intermediate layer resin composition in Example 1 for the surface layer, a fiber-reinforced plastic molded article was obtained in the same manner as Example 1.

Moreover, 23 parts of curing agent (Burnock DN-980) were blended with 100 parts of acrylic resin (Acryldic A-801-P) as coating material followed by spray coating, curing for 30 minutes at 60°C and then for 24 hours at normal temperature, and measuring the surface smoothness of the molded article 1 week later in the same manner as previously described.

The results for surface smoothness were such that the GM-Tension value was 20.2,

and the GM-Tension value 72 hours after demolding was 19.8, thereby confirming that high surface smoothness is maintained in the same manner as the results for Example 1.

Example 10

With the exception of using mold gel coating resin (NC-72370 manufactured by Nippon Fellow Co., Ltd.) as gel coating resin, a fiber-reinforced plastic molded article obtained in the same manner as Example 3 was evaluated as a molding mold for fiber-reinforce plastic molding. The resulting molding mold was subjected to temperature changes of 20°C, 60°C and 80°C, and the mold surface smoothness at each temperature was measured using the surface smoothness evaluation method previously described. Those results are shown in Table 3. The molding mold produced according to the present invention was confirmed to exhibit hardly any change in surface smoothness caused by changes in temperature.

Comparative Example 1

With the exception of using 80 wt% of the unsaturated polyester resin composition (2) and 20 wt% of the unsaturated polyester resin composition (3) as polymerization curable unsaturated resin, and adjusting the viscosity of the intermediate layer resin composition to 38.7 and the thixotropy to 6.8, evaluation was performed in the same manner as Example 1. Those results are shown in Table 3.

Comparative Example 2

With the exception of using 100 parts of the unsaturated polyester resin composition (4) as polymerization curable unsaturated resin, and adjusting the viscosity of the intermediate layer resin composition to 41.2 and the thixotropy to 7.1, evaluation was performed in the same manner as Example 1. Those results are shown in Table 3.

Comparative Example 3

With the exception of using 25 parts of calcium carbonate (SS-30 manufactured by Nitto Funka Co., Ltd., which has a mean particle size of 7.41 microns as calculated from specific surface area) as filler, using 1.3 parts of thixotropic agent (Aerosil #200), and adjusting the viscosity of the intermediate layer resin composition to 19.3 and the

thixotropy to 5.6, evaluation was performed in the same manner as Example 1. Those results are shown in Table 3.

Comparative Example 4

With the exception of using 170 parts of calcium carbonate (R manufactured by Maruo Calcium Co., Ltd., which has a mean particle size of 7.4 microns as calculated from specific surface area) as filler and adjusting the viscosity of the intermediate layer resin composition to 140.0 and the thixotropy to 6.1, evaluation was performed in the same manner as Example 1. Those results are shown in Table 3.

Comparative Example 5

With the exception of not using an intermediate layer, which is a characteristic of the present invention, a fiber-reinforced plastic molded article obtained in the same manner as Example 10 was used for evaluation as,a fiber-reinforced plastic molding mold of the prior art. The surface smoothness of this molding mold was such that print through of the fiber pattern was observed from the fiber-reinforced plastic layer, and surface smoothness was poor. Those results are shown in Table 3.

In addition, the surface was sequentially polished with #400, #600, #800 and #1000 waterproof sandpapers followed by surface buffing using a polishing compound to produce a molding mold with a mold surface having a GM-Tension value of 19.0 as determined by the previously mentioned surface smoothness evaluation. Continuing, in order to observe the effects of temperature change on the mold surface, the molding mold was subjected to temperatures of 20°C, 40°C, 60°C and 80°C in the same manner as Example 10 and surface smoothness at each temperature was measured using the previously mentioned surface smoothness evaluation method. Those results are shown in Table 4. The smoothness of the molding mold surface was observed to change and become impaired accompanying changes in temperature.